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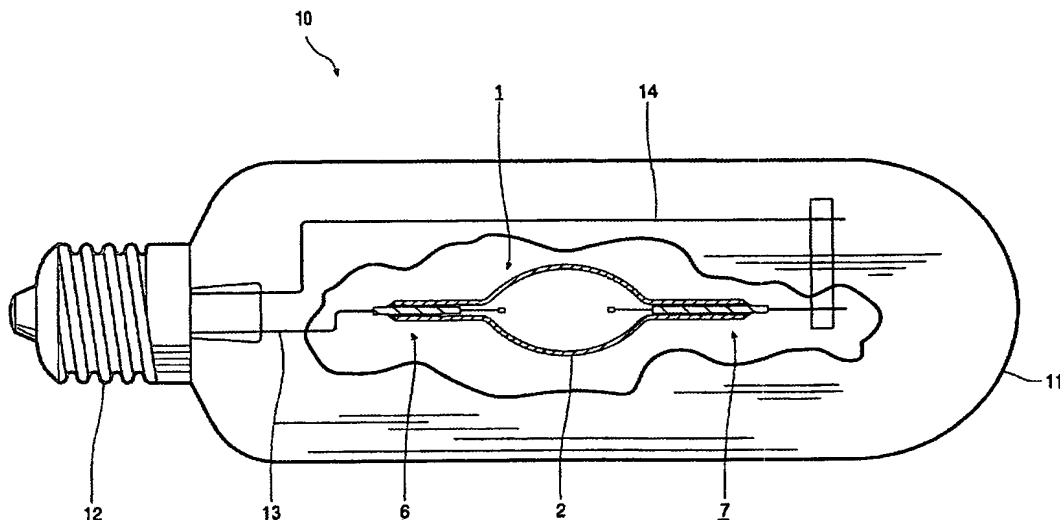
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(54) Title: TRANSPARENT POLYCRYSTALLINE ALUMINIUM OXIDE



(57) Abstract: The present invention relates to highly dense translucent and transparent aluminium oxide components for applications, e.g. in the lighting industry, where a fine crystal size has to be obtained and stabilized for use at temperatures of 800 °C or more. Disclosed are high-strength polycrystalline alumina products which include 0.001 - 0.5 weight-% ZrO₂ stabilizing a fine crystal size < 2 µm or, preferably, < 1 µm if used at temperatures of 800°C or more. The microstructure exhibits an extremely high relative density enabling a high real in-line transmission > 30 % measured over an angular aperture of at most 0.5° at a sample thickness of 0.8 mm and with a monochromatic wavelength of light λ, preferably, of 645 nm.